

CLAIMS

1) Torch with integrated electrolytic action for the surface treatment of metals, comprising a peak-paddle (2) connected with the unipolar electric current supply (7, 16) from an external apparatus, the other pole being connected with the metal surface being treated, characterised in that it has the electrolytic solution used, for the specific treatment, arranged in a tank (6, 21) connected to said torch to supply said peak-paddle through channels inside said torch; the electrolytic solution is put under pressure in the delivery direction through a dosaging device of said solution controlled by the user.

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2) Torch, according to the previous claim, characterised in that it has as a device for controlling the delivery of the electrolytic solution, a capillary passage, possibly with a slightly variable conical section, arranged in any point of the supply ducts and activated by pressure of the user on said tank (6, 21).

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3) Torch, according to the previous claim 1, characterised in that it has as a device for controlling the delivery of the electrolytic solution, a sequence valve (48), arranged in any point of the supply ducts and activated by pressure of the user on said tank (6, 21).

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4) Torch, according to the previous claim 1, characterised in that it has as a device for controlling the delivery of the electrolytic solution, a manual pump with a mobile piston (3), arranged in any point of the supply ducts (13, 14) and activated by pressure of the user on the body (1) or shell of said torch.

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5) Torch, according to the previous claim 4, characterised in that it has, associated with said pump with a mobile piston (3), at least one non-return valve (12) arranged in the ducts (11, 13) between said piston and the tank.

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6) Torch, according to the previous claim 1, characterised in that it has as a device for controlling the delivery of the electrolytic solution, a manual pump realised with the flexibility of the shell (18, 27, 30) of said torch, arranged in any point of the supply ducts.

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7) Torch, according to the previous claim 6, characterised in that it has said

pump realised with a pair of non-return valves arranged one upstream (25) and the other downstream (29) of said flexible zone (27, 30) of the shell (18).

8) Torch, according to one of the previous claims, characterised in that it
5 has said tank (6, 21) of the electrolytic solution removably connected (5, 35, 36)
with said torch.

9) Torch, according to one of the previous claims, characterised in that it
has said tank in which, connected with the inside thereof, there is a filter (38)
10 permeable just to air or a capillary (17) for the re-entry of air after the suction of
the electrolytic solution.

10) Torch, according to the previous claim 9, characterised in that it
has said tank of the type with a semi-rigid or flexible casing for the re-entry of air
15 after spraying worked by the user.

11) Torch, according to one of the previous claims 1 to 8,
characterised in that it has said tank of the type with a rigid casing (21) in which
inside of it there is a mobile partition (39) with a surface in contact with
20 atmospheric pressure (37, 38) for the re-entry of air after the suction of the
electrolytic solution.

12) Torch, according to the previous claim 11, characterised in that it
has said tank of the type with a rigid casing (21) in which inside of it there is a
25 mobile partition (39) with a surface in contact with a pressurised chamber (G) to
push upon said partition during the delivery to push the electrolytic solution.

13) Torch, according to the previous claim 11, characterised in that it
has said tank of the type with a rigid casing (21) in which inside of it there is a
30 mobile partition (40) equipped with a union hole (41) for a traction and return
shaft (42) of the partition, to realise the reloading of the tank with the suction of
the electrolytic solution.

14) Torch, according to one of the previous claims 6, 7, characterised
35 in that it has said shell (18) of the torch shaped to realise rigidifying zones (23,

28) thereof and zones with concentrated flexibility (30).

15) Torch, according to the previous claim 14, characterised in that it has the shell (18) shaped to realise a chamber (22) on the central metallic body of the torch upstream of the non-return valve (25).

16) Torch, according to the previous claim 15, characterised in that it has the shell (18) shaped to realise a chamber (27) at the second no-return valve (29) and at the most flexible zone (30) of said shell.

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17) Torch, according to one of the previous claims 14 to 16, characterised in that it has said shell of the torch shaped to realise preferential sealing zones (32, 33) between the inside of the shell and the metallic body, through annular seats (33) on said body and corresponding annular inner edges (32) in the shell.

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18) Torch, according to one of the previous claims 14 to 16, characterised in that it has said shell (18) of the torch shaped to realise preferential sealing zones between the inside of the shell and the metallic body, through annular grooves (34) on the outside of the shell for the application of belt and locking rings of said shell.